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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,010	02/19/2002	Stephen C. Vincent	P04860US1	6367

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DES MOINES, IA 50309-2721

EXAMINER

EASTHOM, KARL D

ART UNIT PAPER NUMBER

2832

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/079,010

Applicant(s)

VINCENT, STEPHEN C.

Examiner

Karl D. Easthom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-10, 12, 13, 15 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-10, 12-13, 15, and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7-10, 12-13, 15 and 17-20 are rejected under 35 U.S.C. 103 as being obvious over by Yamada in view of Szupillo, Copetti et al., or Sato (61-27264).

Yamada discloses the claimed invention at Fig. 10, except the material of the outer barrier being tantalum pentoxide, and the sputtering of claim 12. The single metal thin film resistive layer of nichrome is at the top of col. 6, meeting claims 8-10, 13 and 15, with double protective layers for claim 15. Sato discloses sputtering a tantalum oxide layer for the purpose of providing a protective layer so that it would have been obvious to employ a sputtered layer, to replace the protection layer of Yamada, for protection where the references disclose a protection layer or double protection layer for a resistor. Paragraphs 63 and 69 of Copetti et al. disclose dielectrics of tantalum pentoxide, as substitutes for other dielectrics, and providing protection or barriers for nichrome resistors such as that of Yamada, so that it would have been obvious to form one or two layers of such a material where it is a well known protective layer compatible with nichrome resistors as suggested. Szupillo discloses dielectrics of tantalum pentoxide, as substitutes for other dielectrics, and notes that same is a barrier layer, providing protection or barriers for resistors such as that of Yamada, so that it would have been obvious to form one or two layers of such a material where it is a well known protective layer compatible with resistors as suggested, and where Yamada discloses a

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barrier layer. For claims 13 and 15, the alumina substrate is at col. 7. As an alternative to claim 12, Copetti discloses depositing the tantalum pentoxide layer, and sputtering is a well-known method of deposition, rendering such a process obvious. Or it is not clear how sputtering the layer renders it distinct from other methods of deposition, so that such a layer is met by deposition as a product by process limitation rendering no distinct structure. For claim 19, Fig. 1 discloses the electrodes 27 wrapping around the top. For claim 20, the thin film of nichrome noted above meets the claim. For claim 18, the outer layer can meet the test where it is the same material. There will be no barrier layer upon replacement as suggested.


3. Applicant's arguments filed 6/9/05 have been fully considered, and are not persuasive or are moot due to the new grounds of rejection. Applicant argues that there is no motivation to replace the screen-printed barrier layer of Yamada. This is not correct. The motivation is as noted. The motivation, or suggestion, for example, is that one known prior art dielectric can be replaced for another since they are both dielectrics and are used as barriers, and are compatible with the same materials used by Yamada, nichrome.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (571) 272-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Karl D Easthom
Primary Examiner
Art Unit 2832

KDE